FRIENDS OF ARMY AVIATION – OZARK (FAA-O) EQUIVALENT LEVEL OF SAFETY FOR: PARADROP OPERATIONS

1. **Purpose:** To provide aircrew members and supported units guidance for the preparation of the aircraft and the procedures and guidelines to follow when conducting Parachute (Static Line and Free Fall) operations. It covers passenger/crew briefings, preflight inspection, aircraft preparation, crew duties, flight procedures, training, qualification, and currency requirements. This document outlines the Equivalent Level of Safety (ELS) for all paradrop operations conducted by FAA-O.

2. **References:**

   a. Title 14 of the Code of Federal Regulations, Part 105, Parachute Operations.
   b. TC 3-21.220, Static Line Parachuting Techniques and Training.
   c. ATP 3-18.11, Special Forces Military Free Fall Operations.
   d. MCWP 3-15.7 (FM 57-220) Static Line Parachuting Techniques and Training.
   e. TC 1-211, Aircrew Training Manual, Utility Helicopter, UH-1, Task 2064, Perform Paradrop Operations.
   f. United States Parachute Association Skydiving Aircraft Operations Manual.

3. **Scope:** To ensure all crewmembers and supported units are familiar with procedures and requirements involved in PARACHUTE operations. This ELS is mandatory for all PARACHUTE operations conducted by or under the control of the FAA-O.

4. **General:** Parachute operations may be conducted in support of ground units when approved by the FOAA Director of Operations.

   a. While conducting PARADROP operations the minimum crew shall be 3 qualified and current crewmembers and 1 qualified and current jumpmaster (JM). The JM for Static Line jump operations will be a Static JM. Free Fall JM are allowed to participate in the jump. An additional crew chief is recommended for safety and to aid in the recovery of deployment bags (D-bags). Crewmembers being trained and/or evaluated under the supervision of an Instructor meet this requirement.
   b. The supported unit will be responsible for providing medical support during PARADROP operations and training.
   c. The aviation unit should provide the safety harness and headset for use by the Jumpmaster (JM) and Jumpmaster in training, if required.

5. **Crew Duties and Responsibilities:**

   a. Air Crewmembers participating in parachute operations shall read, be familiar with and comply with the guidance in this ELS. The PARADROP JM(s), Drop Zone Operator/Manager (DZO) and / or the Safety Observer will be briefed by the PIC of

the applicable contents prior to the jump mission. A copy of this appendix should accompany each aircraft/crew during airborne operations.

b. It is the responsibility of the supported customer, or authorized representative to acquire all airspace clearances and FAA notification in accordance with FAR Part 105. The following is a partial extract of FAR Part 105.25 which covers information required and notice of cancellation or postponement of jump. Each person requesting an authorization under Para 105.19 or Para 105.21, and each person submitting a notice under Para 105.23, must include the following information (on an individual or group basis) in request or notice:

(1) Date and time jumping will begin.
(2) The size of the jump zone expressed in nautical mile radius around the target.
(3) The location of the center of the jump zone in relation to the nearest VOR facility in terms of the VOR radial on which it is located, and its distance in nautical miles from the VOR facility when that facility is thirty (30) nautical miles or less from the drop zone target; or the nearest airport, town, or city depicted on the appropriate Coast and Geodetic Survey WAC facility or Sectional Aeronautical Chart, when the nearest VOR facility is more that than thirty (30) nautical miles from the drop zone target.
(4) The altitudes MSL at which jumping will take place.
(5) The duration of the intended jump.
(6) The name, address, and telephone number or the person requesting the authorization or giving notice.
(7) The identification of the aircraft to be used.
(8) The radio frequencies, if any, available in the aircraft.

c. Each person requesting an authorization under Para 105.19 or Para 105-21 and each person submitting a notice under Para 105.23, must promptly notify the FAA air traffic control facility or FAA flight service station from which it requested authorization or which if notified, if the proposed or scheduled jumping activity is canceled or postponed.

d. It is the responsibility of the supported customer to acquire all land agreements if needed for the support of airborne operations.

e. DZ Operator/Manager: The DZ Operator (DZO), one person should be designated as the on-site official responsible for the DZ operations. This individual should be a person from the supported customer's organization; however, an FOAA member could perform this function. For the purpose of this ELS, that person will be referred to as the DZ operator (DZO). The DZO is responsible for managing and overseeing the entire operation, to include both the skydiving and the supporting aircraft operations. The ultimate responsibility for the safety of the DZ operation resides with the DZO. Specific duties (not all inclusive) are as follows:

(1) Supervise all skydiving-related activities.
(2) Ensure compliance with all FARs, USPA Basic Safety Requirements (BSRs) and other federal, state and local rules and regulations.
(3) Coordinate DZ activities with other aeronautical users, facility managers and community officials and leaders, as appropriate.
(4) In coordination with the airport manager, establish a parachute landing area and discuss airport traffic patterns.

f. PC: The pilot in command is responsible for the safe and efficient operation of the aircraft. The legal responsibilities of the pilot, in regard to the operation of the aircraft, are defined in the FARs, especially Parts 61, 91, 105 and 119. Of great importance is FAR 91.3(a): "The pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft." It should also be understood that a jump pilot can fly totally cost-efficiently and still abide by all regulations and safety procedures. Specific duties include:
(1) Operate aircraft in accordance with all federal, state and local regulations including the aircraft flight manual.
(2) Properly pre-flight aircraft before each flight.
(3) Perform proper loading and distribution of occupants and/or equipment and ensure that each flight is conducted within weight and balance limits.
(4) Ensure that each occupant properly uses a seat belt during ground movement, takeoff and landing.
(5) Attend the jump briefing given by the airborne unit.
(6) Brief the DZO, jumpmaster, and jumpers on safety in and around the aircraft using the PARADROP supplemental checklist.
(7) Determine the traffic pattern, jump altitude, and number of sorties to flown.
(8) Stay current on weather forecasts.
(9) Coordinate desired altitude and airspeed with the customer.

g. Crew Chief: The Crew Chief will:

(1) Attend the jump briefing given by the airborne unit.
(2) Ensure aircraft is taped appropriately with 100-mph tape (floors, doors, ramp – aircraft dependent).
(3) Ensure the static line and equipment are installed correctly and the aircraft is prepared for PARADROPS. Verifies that the aircraft is properly rigged, with special attention given to the Modified Anchor Line system (Donut) and modified floor attachment seat belts for Static Line operations.
(4) Conduct a passenger brief.
(5) Assist JM in Jumper special mission equipment checks.
(6) Relay time warnings and Assists the JM as directed.
(7) Inform pilot that jumpers have cleared the aircraft, number of chutes opened and that static lines/deployment bags have been retrieved.

(8) Assist in retrieving static lines.

h. Supported Customer: The supported customer will:

(1) Acquire all land use agreements needed for the support of airborne operations.
(2) Acquire all airspace clearances and FAA notification in accordance with FAR Part 105.
(3) Prepare the aircraft providing necessary tape, padding and wind streamers.
(4) File NOTAM if required.
(5) Ensure appropriate medical personnel are available at the DZ.
(6) Provide means of communication (compatible radio, frequency) between the aircraft, and the DZO.

i. Jumpmaster (JM): The JM will:

(1) Will be designated for each aircraft and has overall responsibility for the safety of all the Jumpers during the conduct of operations.
(2) The JM will inspect the aircraft for rigging with the pilot and CE, and ensure the Anchor system is properly installed (Static Line).
(3) Conduct Jumper and Parachute Inspection prior to Jumpers enplaning the aircraft.
(4) Assign the seating location for each Jumper inside the aircraft and ensure they do not move from their assigned position.
(5) Will personally hook-up the Static Line to the Anchor system for each jumper.
(6) Will signal jump personnel when seatbelts can be unfastened.
(7) Will wear a headset if possible and maintain two-way intercom communications with the aircrew.
(8) During Static Line operations, the JM remains with the aircraft and should have a troop seat available for all take-offs and landings. In addition to his individual equipment, he will wear a safety restraint harness and be secured to a cabin floor tie down ring. The JM will also carry a sharp knife.
(9) Assist the CE if requested, to recover D-Bags after all jumpers are clear of the aircraft.

j. Individual Jumpers: Individual Jumpers will:

(1) Understand all aspects of the PARADROP operation and applicable emergency procedures.
(2) Static line jumpers ensure reserve chute rip-cord is protected/covered at all times once JMPI s accomplished through the completion of the jump execution sequence.
(3) MFF jumpers ensure that the ARR system is deactivated during any abnormal situation requiring the aircraft to descend from altitude and land.

(4) Take all commands from the JM and/CE

6. Training Requirements: Qualification, Currency and Operational Requirements.

a. Except during qualification, crew members will have parachute operations designated by the Operations Officer and Chief Pilot in their training records. After a crewmember completes qualification, parachute operations will be added to the individuals training record. The entry will be: PARADROP Qualification with the date.
b. Air crew members will be trained and qualified by an FOAA Instructor Pilot who is designated to perform PARADROP operations.
c. To be considered current, crew members who have parachute operations designated on their training records must perform an annual iteration if assets are available. If assets are not available, documented classroom training will suffice for currency requirements. However, before a crewmember can perform a PARADROP operation, they will demonstrate proficiency to an FOAA Instructor Pilot during an actual PARADROP event. FOAA Instructor Pilots are authorized to self-start for initial qualification and currency requirements.
d. Operational Requirements:

(1) AIRCREW: Aircrew will consist of a minimum of a PC/PI/CE. For PARADROP missions, the assigned mission PC must be qualified per Appropriate ATM for PARADROP operations. One PARADROP qualified r Crew Chief is required. A qualified jumpmaster must be on board the mission aircraft during the mission and a qualified static assistant to the jumpmaster must be on board if the jumpmaster is jumping.

(2) WEATHER:

(a) Wind: Maximum allowable wind for static line PARADROPS is 13 knots (Land) and 17 knots (Water) on the drop zone (DZ) surface. The maximum allowable wind for MFF is 18 knots on the DZ. The DZ Operator/Manager (DZO) is responsible for wind information on the DZ and will be briefed by the PC to notify participating aircraft if surface winds exceed the limit during operations at DZ.
(b) Visibility: Aircraft will maintain VFR cloud clearance at all times. No drops will be made through a cloud layer. Minimum flight visibility over the DZ during operations is three (3) statute miles.

(3) ALTITUDE AND AIRSPEED:

(a) ALTITUDE:

i. Minimum drop altitude for static line Personnel drops is 1500 feet AGL and minimum bail out should be 1250 feet AGL.
ii. Maximum altitude for all static line drops is 2999 feet AGL
iii. The minimum Exit Altitude for MFF operations is 5000 feet AGL and Opening Altitude is 3500 feet AGL.
iv. Maximum altitude for Free Fall operations is 10,000 feet PA and remain within aircraft performance limitations IAW the appropriate Operators Manual.

(b) AIRSPEED: Enroute Airspeed shall be restricted to 90 KIAS with cargo doors open and jumpers inside the cabin. Drop airspeed should not be less than 65 KIAS or more than 75 KIAS (70 KIAS is the optimum drop speed).

7. Briefings:

a. Crew Briefing: The PC will brief the crew prior to departing for jump mission. The PC will ensure the Crew Chief and jumpmaster understand established procedures, special restrictions and requirements, and have necessary flight gear available. PC will ensure necessary harness restraint equipment, seat belts, headset for the jumpmasters, tape and padding are available for missions.
b. Pre-jump Briefings: The following personnel will conduct a pre-jump airborne operation meeting; all aircraft crew members, DZO, safety observers, all participating jumpmasters. During this meeting, this ELS will be covered. Additional items to cover will be:

(1) Communications
(2) Medical – MEDEVAC, MEDIC, Hospital LZ
(3) NOTAM clearance

c. Jumpmaster/Pilot Safety Briefing: The DZO or Jump Master will ensure all participating personnel/ jumpers are present for this briefing. The Pilot in Command will ensure flight crews are present. The PC will utilize The PARADROP Briefing Checklist at the back of this ELS and ensure the following items are covered.

(a) Crew Introduction
(b) Personnel equipment
(c) Weather
(d) Flight Data: Route, Altitude, Times
(e) Entry and Exit from the aircraft
(f) Seating
(g) Seatbelts / Restraints

(h) Movement inside the aircraft
(i) Communications
(j) Equipment Security
(k) Smoking
(l) Oxygen – if required
(m) Weapons
(n) Parachutes
(o) Hearing protection
(p) Emergency procedures

i. Exits
ii. SEATING: Jumpers must remain in their original seating arrangement until the preparatory jump command is given. The jumpmaster (if not jumping), the static assistant, the Crew Chief and Flight Engineer will continue to wear safety restraints while the jump is in progress.
iii. Emergency equipment
iv. Emergency landing / ditching
v. Bail out
vi. Reserve parachute - guarded at all times by covering it with left hand across the front (without grasping it). If a parachute prematurely opens within aircraft, all personnel should try to grab the parachute to prevent its deployment beyond the door of aircraft. Should this occur, pilot will slow his airspeed and land as soon as possible.
vii. Towed Jumper: Towed parachutist stays in a tight body position with both hands-on reserve; this indicates consciousness. Right hand protects reserve rip cord grip. Parachutist is prepared to activate reserve if cut free from aircraft. Jumpmaster will notify pilot that a parachutist is being towed. Jumpmaster recovers and stores all other deployed static lines and deployment bags. Pilot slowly descends to DZ or other appropriate site and brings aircraft to a hover. Jumpmaster unhooks towed parachutist static line, deplanes and detaches towed parachutist.
viii. Cancellation of jump: If jump is canceled for any reason, jumpmaster will ensure safety belts are fastened prior to descending. Jumpers will remain in position within the aircraft until it has landed and jumpmaster has unhooked static lines from helicopter.

8. Safety Considerations:

a. PARADROPS, STATIC LINE AND FF:

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WARNING: A walk-around personnel safety restraint harness is worn by both CE's and JM's during Paradrop operations. The restraint harness is not intended to be used in place of a seat belt. The purpose of the walk-around restraint is to allow the CE and JM to work inside the cabin with the cabin doors open in flight without falling out. Therefore, the CE/JM will adjust the pigtail to a length that allows free movement within the cabin, but will not allow him to fall out of the aircraft door or ramp.

(1) All personnel will be seated and belted prior to preparation to jump unless this requirement is waived.
(2) The jumpmaster will ensure that any parachute automatic opening devices are disarmed prior to descent for landing.
(3) Safety harnesses will be attached to floor rings at all times while airborne.
(4) Jumpers will wear flotation gear when drops are within one (1) mile of water.
(5) Paradrop operations will only be conducted during VMC and no aircraft or jumper may conduct parachute operations into or through a cloud IAW FAR Part 105.
(6) Night parachute operations require the jumper or parachuting object to display a light that is visible for at least 3 statute miles IAW FAR Part 105.
(7) All loose equipment will be secured including aircraft soundproofing.
(8) External weapon mounts will be removed or stowed.
(9) In the event of an aircraft accident, the walk-around safety restraint harness will not prevent injury. When not required to move around in the aircraft and during all takeoff and landings, the CE and FRM should be in an aircraft seat with seat belts secure.
(10) All jumpers will be secured by the modified seat belt assembly when on the cabin floor or by the seat belt assembly in the aircraft seat for takeoff and landings. Seat belts will be on at any time the aircraft is below 1000 feet AGL or as applicable during an aircraft emergency.
(11) Prior to conducting jump operations, PC and JM will conduct a joint inspection of the aircraft to ensure all preparations have been completed. Any discrepancies noted will be corrected or the aircraft will not be utilized for the jump mission.
(12) The CE is the eyes and ears in the cabin area. During Paradrop operations, the CE will constantly monitor the jumpers in the cabin, on the exit, and during their descent until confirming all parachutes open, providing constant situational updates to the PC during the entire operation
(13) In the event of an aircraft emergency, jumpers will not exit without the approval of the JM/PC. The command to exit will be given to the JM by the PC. Jumpers will exit on an individual basis. Mass exits are not authorized. No exit will be allowed during autorotation.

(14) Extra personnel should not be carried on the aircraft, with the exception of training CE's, training JM's, and authorized PAO personnel at the discretion of the AMC/PC.
(15) The DZO must give winds on the DZ and the Clear to Drop, dependent on the Paradrop briefing prior to jumpers exiting the aircraft.

b. STATIC LINE ONLY:

WARNING: The towed jumper must remain in a tight body position and protect the rip cord grip with his right hand. Accidental activation of the reserve while being towed may be fatal.

NOTE: The pilot must maintain level flight and drop airspeed during the jump, to include D-bag recovery to preclude bag entanglement with the exterior of the aircraft.

CAUTION: There must be a 4 second interval between the exit of parachutists to avoid possible jumper entanglement.

(1) The maximum number of jumpers will be 8 for Static Line operations. The JM will remain with the aircraft for static line jump operations.
(2) In the event of a towed jumper on a rotary-wing aircraft, the JM will prevent any other jumpers from exiting and will notify the pilot. The parachutist stays in a tight body position and protects the rip cord grip or rip cord handle. The JM will ensure the jumper is securely attached to the aircraft and will not break free during descent. If the jumper is not securely attached, the JM will attempt to shake or cut him free. If the jumper is attached, the aircraft will slowly descend to the DZ and come to a hover, and the jumper will be freed from the aircraft.
(3) In the event a jumper's parachute deploys in the aircraft:

(a) If the parachute goes out the door, the jumper WILL immediately depart the aircraft.
(b) If the parachute remains inside the cabin, an immediate attempt will be made to secure the chute inside the aircraft.

WARNING: Ensure that static lines remain secured to the anchor point until they are recovered or the aircraft has landed. If recovery is impossible, maintain tension on the lines (CE/JM) and execute landing with forward speed to avoid entangling deployment bags in the rotor system.

c. FREE FALL (FF) ONLY:

DANGER: Prior to every lift while in default (training) mode, the CYPRES 2 will be powered OFF and powered back ON at the DAF. This ensures that all parachutists on the aircraft have the correct DZ setting. The CYPRES 2 will automatically reset the DZ under certain situations. Failure to power OFF and power back ON the CYPRES 2 just prior to every lift may result in the CYPRES 2 not firing at the intended altitude, which may result in injury or DEATH to the parachutist. The CYPRES 2 must not be powered ON in-flight while in the Default (Training)

mode. The preferred mode of operation for Military CYPRES 2 is in the Absolute (Operational) mode.

WARNING: If parachutes use automatic rip cord releases, ensure that the automatic release is disconnected before descent is initiated. For an in-flight emergency, if altitude cannot be maintained, notify the jumpmaster immediately so automatic rip cord releases can be disconnected.

(1) The primary Army SOF MFF parachute is the Military CYPRES 2. In the default (Training) mode, it arms itself at 3000 feet. Once armed, the activation altitude is at 1500 feet with a vertical activation speed of 115 feet per second. When the CYPRES 2 is in the Absolute (Operational) mode, once properly powered ON, the system is armed immediately and the activation altitude is based on the selected setting with the vertical activation speed of 115 feet per second.

(2) The minimum Exit Altitude for MFF operations is 5000 feet AGL and Opening Altitude is 3500 feet AGL.

9. Equipment:

a. Eye/Ear protection.
b. ID tags.
c. Sleeves down.
d. Service-approved personnel restraint (Monkey Harness/Strap) for CE/JM.
e. Service-approved parachute system.
f. Modified extended seat belt assemblies (to secure jumpers inside aircraft).
g. Troop door straps (IAFT assembly installed) in lieu of the extended seat belt assy.
h. Modified anchor line system (Donut) for Static Line operations.
i. Kit bag with D-rings for securing D-bags after each Static Line drop.
j. Headset and ICS cord for JM and JM in training.
k. 100 mile an hour tape.
l. Wind Streamer.

10. Preparations and Inspections: Prepare and inspect the UH-1H as follows:

a. Preparation. The following steps prepare the UH-1H for jumping:

(1) Both cargo compartment doors are locked in the open position. If the doors cannot be locked, they are removed.

(2) All troop seats are removed except one seat on each side (located to the rear of the pilot and copilot seats). These two seats are installed so they are facing to the rear of the aircraft. If eight parachutists are to jump, all seats in the cargo compartment are removed.

(3) The door and frame are inspected to ensure there are no sharp edges that could cut or fray static lines. If these are determined to be hazardous, corrective action is taken before the helicopter is jumped.

(4) Safety belts are attached to the tie-down rings on each side of the compartment for floor-seated parachutists.

(5) The door gunner/crew chief foot-operated radio switch may be unscrewed (by hand) before jumping. The exposed radio switch wires are taped to prevent an electrical short. If the switch is not removed, it is padded and taped. The ground-handling wheel mount brackets on both landing skids are padded with cellulose wadding and taped (Figure 1). Some aviation units have fabricated special covers that may be used to cover the wheel-mount brackets.

b. Anchor Line Systems. Two anchor line systems are available with the UH-1H aircraft for airdrop of personnel. They are the standard overhead system and the expedient system (Figure 2). The expedient system (A-7A anchor line cable assembly) consists of a cotton A-7A strap, four D-rings, and four connector snaps (TM 10-1670-298-20&P authorized the fabrication of the A-7A strap from Type X cotton webbing). Nylon A-7A straps may be used with cotton buffers on the D-rings and connector snaps.

c. Anchor Line Assembly Installation. An anchor line assembly is installed on each side of the aircraft. It can be installed quickly by means of four tie-down rings located on the floor on the right and left sides of the aircraft compartment. The A-7A strap is threaded through the D-rings, which are used for attachment of the static line snap hooks (Figure 3).

(1) *Left door*. For the left door, one connector snap on the A-7A strap is attached to the tie-down ring number G2. The strap is connected to the tie-down ring number F4. Four D-rings are on the strap with the round part of the rings facing outboard (of aircraft). The strap is then connected to tie-down ring number K3 and tie-down ring number J4. The free end of the strap is secured to the strap fastener, and any excess between tiedown rings number J4 and number G2 is taped. All connector snaps must be safety wired.

(2) *Right door*. The same procedures apply to the right door as the left except that the A-7A strap is attached to tie-down ring number G1, then to F2. Four D-rings are on the strap with the round part of the rings facing outboard (of aircraft). The free end of the strap is secured to tie-down rings number K2 and number J3, and the strap fastener is secured. Excess strap between tie-down rings number J3 and number G1 is taped.

d. Inspection. Before enplaning, the JM and pilot, or pilot's representative, jointly inspect the aircraft to determine the following:

(1) All protruding objects near the cargo compartment doors are removed or taped.

(2) The lower right and left aft edges of both the cargo compartment doors are padded and taped.

(3) The anchor line cable or field-expedient anchor line system is secure, serviceable, and properly installed.
(4) A safety belt is available for each parachutist.
(5) A headset is available for the jumpmaster to effect coordination among the jumpmaster, the pilot, and the ground.

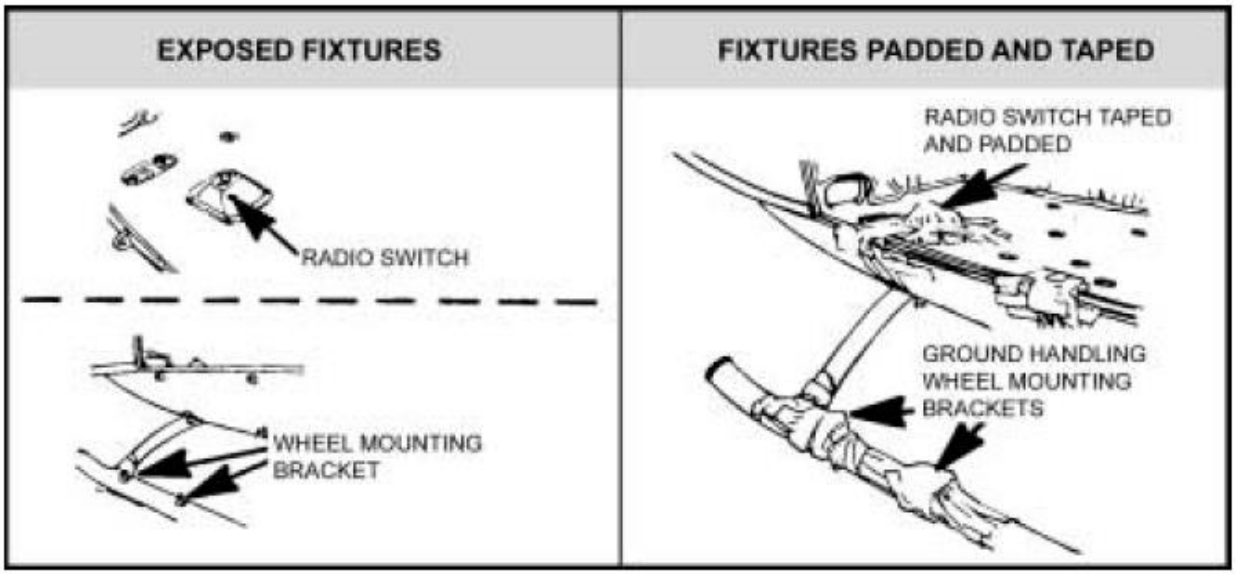

Figure 1. UH-1 exposed fixtures padded.

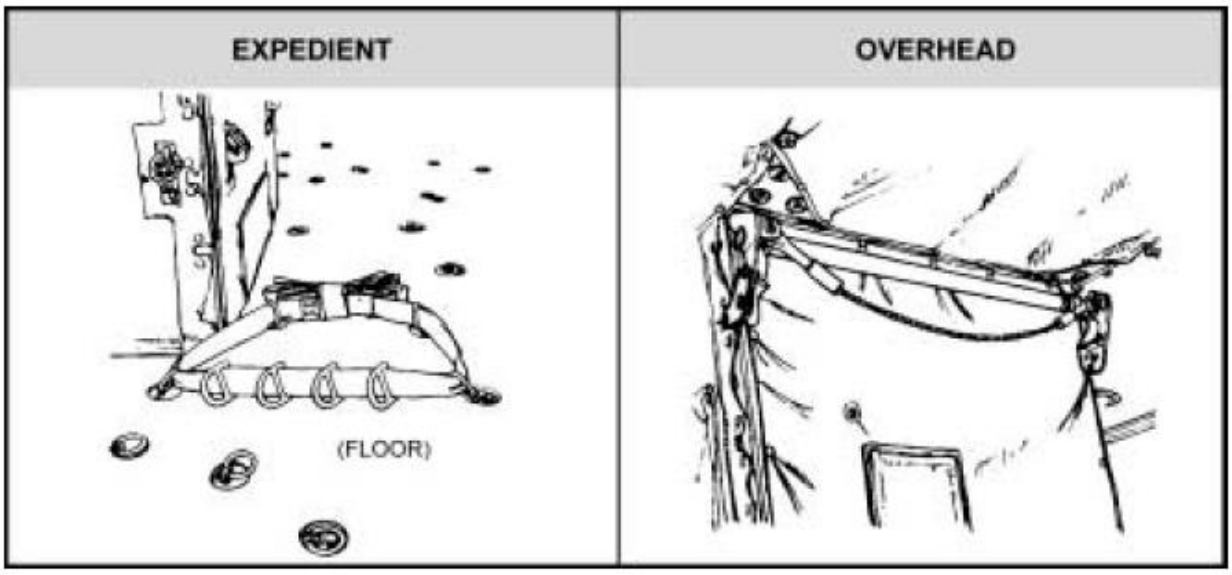

Figure 2. UH-1 anchor line system.

11. Aircrew Procedures and Terminology:

a. STATIC LINE AND FF:

(1) A minimum of one CE and one JM will be utilized for all parachute operations. During Static Line operations, the JM will be Static.
(2) FE/CE and JM harness restraint equipment will be fastened to a floor tie down at all times while the aircraft is airborne.
(3) During loading, jumpers should not approach directly from the front or sides but at a 45-degree angle to the nose of the aircraft., stop outside the rotor disc area and wait for JM and/or CE signal to board. PC will advise JM when to board. Jumpers 1 through 4 enter the cargo compartment through the right door, are hooked up by the JM in numerical order, and seat themselves (Figures 3 and 4). Jumpers 5 through 8 enter the cargo compartment through the left door, are hooked up by the JM in numerical order, and seat themselves.

WARNING: Crowded conditions inside the cargo compartment could cause accidental activation of a reserve parachute, creating an extremely hazardous situation. During movement, the rip cord grip of the reserve parachute is protected by placing the right hand and forearm over the front of the reserve.

NOTE: Once the safety belts are unfastened and an emergency occurs, the JM should have the jump personnel jump if directed by the PC. Should the JM lose communication with the PC, then the decision to jump rests with the JM.

(4) JM will designate each jumper a seat position; assist in loading and fastening safety belts. CE will assist as necessary and verify all safety belts are fastened.
(5) 1000 FEET – Callout made by the PI* to the CE/JM to unbuckle jumper seat belt assemblies and advisory of the minimum safe bailout altitude.
(6) Air to ground radio contact must be established with the DZCO or DZSO prior to giving the jump command.
(7) The PI* will maintain the proper altitude, airspeed, and ground track throughout the jump sequence.
(8) The DZO must announce to the aircraft “Clear to Drop” or “Execute, Execute, Execute” along with the winds on the DZ, prior to jumpers exiting the aircraft.

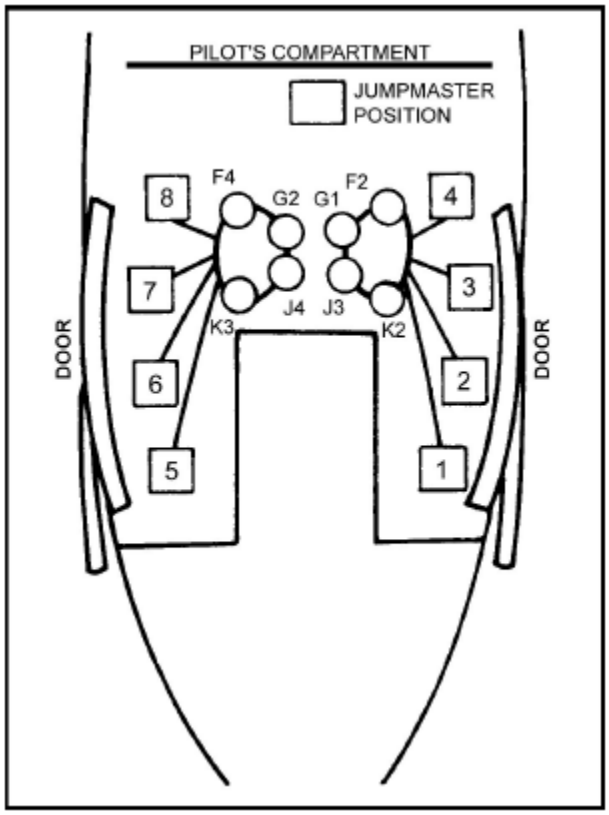

Figure 3. UH-1 seating configuration, expedient anchor line system.

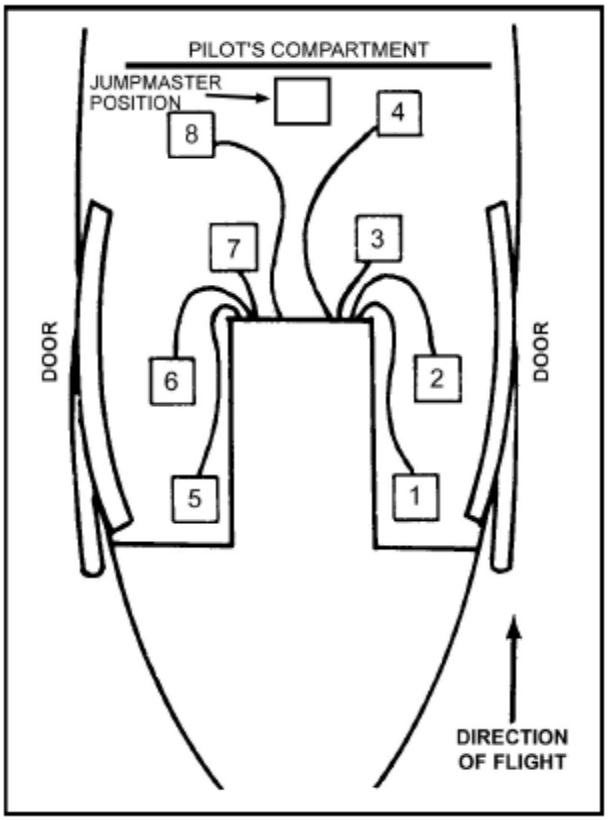

Figure 4. UH-1 seating configuration, overhead anchor line system.

b. STATIC LINE ONLY:

(1) CE will assist as necessary and verify all safety belts are fastened and each jumper static line is secured to the anchor point.

(2) The JM may drop a wind streamer from the aircraft if necessary to determine winds aloft. A piece of cloth or similar material 3-4 ft long, approximately 4-6 inches wide with a weighted end, is a suitable wind streamer. The ballast should not be more than one pound

(3) 1000 FEET – Callout made by the PI* to the CE/JM to unfasten safety belts in order to unbuckle jumper seat belt assemblies and advise the jumpers that the aircraft is above the minimum safe bailout altitude of 1000 feet AGL.

(4) 4 MINUTE, 30 SECONDS, 10 SECONDS – The PC/PI will announce to the JM when the 4 minute checkpoint, 30 seconds checkpoint, and 10 second check points are reached unless otherwise briefed.

(5) STANDBY – JM command (not over ICS) to the Jumpers at the 10 SECONDS call to prepare to exit the aircraft upon next jump command.

(6) CLEAR TO DROP or EXECUTE, EXECUTE, EXECUTE – PC announces to the aircrew and JM after the DZO has announced the DZ wind information and DZ is clear (safe) for PARADROP operations to commence. Usually the PC echoes the DZSO's CLEAR TO DROP or EXECUTE calls.

(7) GO – JM command (not over ICS) to the Jumpers to exit aircraft. The JM issues a "GO" verbal command and a sharp tap on each Jumper selected to exit to ensure proper timing (minimum of 2 seconds between jumpers) and spacing requirements between all jumpers.

(8) JUMPERS AWAY – CE announces to the aircrew when the first Jumper exits the aircraft. The PC will also ensure that the DZO and/or ATC are advised of jumpers exiting the aircraft.

(9) JUMPERS CLEAR – CE announces to the aircrew when last and/or all Jumpers have exited the aircraft.

(10) # OF GOOD CHUTES –CE announces to the aircrew total number of good Parachute Canopies that are spotted after all jumpers have exited the aircraft. The PC will also ensure that the DZO is advised of # of good chutes.

CAUTION: At no time during flight will the static line be disconnected from the aircraft anchor line cable. The aircraft must remain in level flight without descent until the D-bags are properly secured inside the cabin area.

(11) PULLING D-BAGS – FE/CE announces to the aircrew that deployment bag recovery has begun in the cabin area. The FE/CE and/or JM will be working to retrieve all D-bags streaming outside of both cargo doors.

(12) ALL D-BAGS SECURED, CLEAR FOR DESCENT – FE/CE announces to the aircrew that all D-bags have been secured in the cabin area and the aircraft is clear for the descent.

(13) Once the Drop sequence is complete and the CLEAR FOR DESCENT call is given, ensure the aircraft remains above the highest parachute, unless the aircraft is exiting the DZ Area of Operations. Aircraft will remain a minimum of 1000 meters away from all airborne parachutes.

(14) ALL JUMPERS ON THE GROUND – FE/CE announces to the aircrew when all Jumpers have landed on the DZ.

(15) During the descent and prior to landing, FE/CE and JM will return to their Gunner and/or Troop seat and fasten seatbelts in preparation for Before Landing Checks.

c. MILITARY FREE FALL (ONLY):

(1) Aircraft doors are not required to be taped, but may be at the JM's discretion.

(2) Surface winds on the DZ shall not exceed 18 knots during peacetime training MFF operations.

(3) Pilot in command should be aware of middle ear discomfort while conducting MFF operations. If any crew member or parachutist should experience middle ear

discomfort, all measures should be taken to relived the discomfort prior to further ascent/descent.

(4) 1000 FEET – Callout made by the PI* to the CE/JM to unfasten safety belts in order to unbuckle jumper seat belt assemblies and advise the jumpers that the aircraft is above the minimum safe bailout altitude of 1000 feet AGL.

(5) 2 MINUTE, 1 MINUTE, 15 SECONDS – The PC/PI will announce to the JM when the 2 minute checkpoint, 1 minute checkpoint, and 15 second check points are reached unless otherwise briefed.

(6) CLEAR TO DROP or EXECUTE, EXECUTE, EXECUTE – PC announces to the aircrew and JM after the DZSO has announced the DZ wind information and DZ is clear (safe) for parachute operations to commence. Usually the PC echoes the DZSO's CLEAR TO DROP or EXECUTE calls.

(7) GO – JM command (not over ICS) to the Jumpers to exit aircraft. The JM issues a "GO" verbal command to each Jumper selected to exit to ensure proper timing and spacing requirements between all jumpers.

(8) JUMPERS AWAY – CE announces to the aircrew when the first Jumper exits the aircraft. The PC will also ensure that the DZSO and/or ATC are advised of jumpers exiting the aircraft.

(9) JUMPERS CLEAR – CE announces to the aircrew when last and/or all Jumpers have exited the aircraft.

(10) # OF GOOD CHUTES – CE announces to the aircrew total number of good Parachute Canopies that are spotted after all jumpers have exited the aircraft. The PC will also ensure that the DZSO is advised of # of good chutes.

(11) ALL JUMPERS ON THE GROUND – CE announces to the aircrew when all Jumpers have landed on the DZ.

d. NO COMMUNICATIONS:

(1) Standard hand and arm signals will be utilized for both normal communications through the ICS and during lost communications.

(2) The 30 second signal is given with one hand utilizing the index finger and thumb extended straight out with an inch of space between the two. The other fingers will remain tucked into the palm.

(3) Clear to drop is the CE open palm to the door exit.

(4) Towed jumper signal is both hands with fingers interlocked.

(5) Jettison or cutaway a towed jumper is by swiping the palm of the hand face down across the throat.

PARADROP BRIEFING CHECKLIST (Static Line and MFF):

FRIENDS OF ARMY AVIATION – OZARK (FAA-O) EQUIVALENT LEVEL OF SAFETY FOR: PARADROP OPERATIONS

	PARADROP Briefing Checklist
	DZ (LAT/LONG, MGRS, Drop Direction, Size, Surface Conditions, Water Depth, Markings, Obstacles)
	Weather (min. 2000 – 3 for Static Line) (As required for MFF altitudes)
	Winds and their effect on PARADROP operations (Static Line max. 13 knots land & 17 knots water / MFF max. 18 knots)
	NOTAM (published, times, altitude, location)
	Altitude (Personnel Static – 1500 min. and 2999 max., Bundle Static – 300 min., and MFF – 5,000 min.)
	Frequencies & Call Signs
	Equipment (Monkey Harness, Modified ext. seat belts, Door Straps for IAFT aircraft, Donut / anchor line, Headsets, Kit Bag w/D-rings)
	Passenger Brief Conducted (IAW -10/CL)
	Personnel Equipment (Service approved Helmet, Chute, Uniform, Hearing/Eye Pro, CE/JM Sharp Knife)
	Medical Procedures (Onsite, Closest Hospital, L/L, MGRS, FREQ)
	Emergency Procedures (Aircraft, Towed Jumper, Hung D-bag, Bail-out MSA 1000 ft., Open Chute in Cabin)
	Overwater Ops (Safety Boat, Swimmer, LZ Markings, Injury)
	Refuel Procedures
	All Jumpers completed required parachute operation min. requirements prior to jump. JMPI Completed.
	JM's Qualified and Current for type of PARADROPS to be performed. (JM Static or Jumping?)
	Training being conducted (JM, FE/CE, PI). 1 CE required for PARADROP operations
	Seatbelt and/or Safety Restraint (All Take-off and Landings, EP's, 1000' Call-out)
	Type of PARADROP (Training/Tactical/Equipment/Overland/Water)
	Aircraft Rigging (Donut, Ramp, Seatbelts, Tape, ICS Cord routing, Monkey strap hook-up location)
	Number of Lifts Static_____ FF _____/ Jumpers Static_____ FF_____ (UH -Static Line max. 6 Jumpers in Cabin)
	Loading Jumpers (UH: 3 and 9 o'clock positions, around nose of aircraft – though cabin / CH – Rear of aircraft)
	Enroute Airspeed w/jumpers onboard (90 KIAS max. with cargo doors open)
	Once the Drop sequence is complete and the CLEAR FOR DESCENT call is given, ensure the aircraft remains above the highest parachute, unless the aircraft is exiting the DZ Area of Operations
	STATIC LINE OPERATIONS
	Static Line Drop Airspeed (min. 65 KIAS & max. 75 KIAS, 70 KIAS recommended)
	Wind Streamer Procedure
	Static Line Time Calls (4 MINUTE, 30 SECOND, 10 SECOND, or as briefed)

	Static Line Drop Calls (1000 FEET, CLEAR TO DROP, JUMPERS AWAY, JUMPERS CLEAR, # OF GOOD CHUTES, PULLING D-BAGS, D-BAGS SECURED, CLEAR FOR DESCENT, ALL JUMPERS ON THE GROUND)
	D-Bag Recovery Procedure (FE/CE's are the primary for Pulling D-Bags & JM is alternate) with secured Kit Bag
	MFF OPERATIONS
	MFF Drop Airspeed (As briefed, - not to exceed 90 KIAS)
	MFF Time Calls (2 MINUTE, 1 MINUTE, 15 SECOND, or as briefed)
	MFF Drop Calls (1000 FEET, CLEAR TO DROP, JUMPERS AWAY, JUMPERS CLEAR, # OF GOOD CHUTES, CLEAR FOR DESCENT, ALL JUMPERS ON THE GROUND)
	Automatic Rip Cord Release (Arming / Disarming)